AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

1. (Currently Amended) A nucleic acid detection method comprising:

fixing a cell-containing sample directly in divided compartments of a support;

pre-treating the sample to enable amplification of nucleic acids contained in the sample;

performing PCR by placing a PCR mixture, containing primers for amplifying a target nucleic acid, into the compartments of the support; and

determining whether amplified nucleic acids in a PCR solution contain the target nucleic acid.

2. (Canceled)

3. (Previously Presented) The nucleic acid detection method as set forth in claim 1, wherein the nucleic acid exposing step is performed by one or more methods selected from the group consisting of a detergent treatment method, an enzyme treatment method, and a heat treatment method.

4. (Canceled)

5. (Previously Presented) The nucleic acid detection method as set forth in claim 1, wherein the amplified nucleic acids are labeled in the step of performing PCR.

6. (Previously Presented) The nucleic acid detection method as set forth in claim 5, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for complementary hybridization with known gene fragments.

7. (Previously Presented) The nucleic acid detection method as set forth in claim 6, wherein the known gene fragments are fixed on the support in advance.

8. (Previously Presented) The nucleic acid detection method as set forth in claim 5, wherein, in the determining step, the nucleic acids amplified and labeled in the step of performing PCR are used as probes for a DNA microarray.

9. (Previously Presented) The nucleic acid detection method as set forth in claim 1, wherein the sample originates in biological sources.

10. (Previously Presented) The nucleic acid detection method as set forth in claim 9, wherein the biological sample originates in humans.

11. (Currently Amended) A gene detecting kit for detecting a target gene in a sample according to a nucleic acid detection method of claim 1, comprising a sample-fixing support divided into a plurality of compartments to fix a sample directly in the compartments, a target gene amplifying primer; PCR reaction buffer, a mixture of deoxynucleoside triphosphate, labeled deoxynucleoside triphosphate, thermostable DNA polymerase, and an indicator for detecting amplified nucleic acids.

12. (Previously Presented) A gene detecting kit for detecting a disease-associated gene of humans according to a nucleic acid detection method of claim 10, comprising a support divided into a plurality of compartments.

13. (Previously Presented) The gene detecting kit as set forth in claim 12, wherein the disease-associated gene of humans is a gene of infection-causing microbes that have infected humans.

14. (Previously Presented) The gene detecting kit as set forth in claim 13, wherein the gene of infection-causing microbes that have infected humans is a drug-resistant gene.

15. (Previously Presented) The gene detecting kit as set forth in claim 13, wherein the gene of infection-causing microbes that have infected humans is a drug-sensitive gene.

16. (Previously Presented) The gene detecting kit as set forth in claim 12, wherein the disease-associated gene of humans is a marker gene for cancer.

17. (Previously Presented) The gene detecting kit as set forth in claim 12, wherein the disease-associated gene of humans is a genetic disease-associated gene.

18. (Canceled)

19. (Previously Presented) The nucleic acid detection method as set forth in claim 1, wherein the support with the divided compartments is shaped to fit a gene amplifier for PCR (thermal cycler).

20. (Previously Presented) The nucleic acid detection method as set forth in claim 1, wherein, in the determining step, the target nucleic acid is detected by electrophoresis.